

L Number	Hits	Search Text	DB	Time stamp
1	0	(magnetoresistive adj sensor) and self-planar\$3	USPAT; JPO; DERWENT	2003/08/15 11:01
2	0	(magnetoresistive adj sensor) and (self adj planar\$3)	USPAT; JPO; DERWENT	2003/08/15 11:01
3	0	(magnetoresistive) and (self adj planar\$3)	USPAT; JPO; DERWENT	2003/08/15 11:01
4	14	self-planar\$3	USPAT; JPO; DERWENT	2003/08/15 11:02
5	7	"916064"	USPAT; JPO; DERWENT	2003/08/15 11:03
6	13	"221493"	USPAT; JPO; DERWENT	2003/08/15 11:46
7	0	(giant adj magnetoresistive) and (stop adj layer) and (buffer adj layer)	USPAT; JPO; DERWENT	2003/08/15 11:49
8	85	(giant adj magnetoresistive) and (buffer adj layer)	USPAT; JPO; DERWENT	2003/08/15 11:58
9	0	(giant adj magnetoresistive) same (buffer adj layer) same copper	USPAT; JPO; DERWENT	2003/08/15 11:51
10	6	(giant adj magnetoresistive) same (buffer adj layer)	USPAT; JPO; DERWENT	2003/08/15 11:50
11	3	((giant adj magnetoresistive) same (buffer adj layer)) and @ad<20000727	USPAT; JPO; DERWENT	2003/08/15 11:51
12	65	((giant adj magnetoresistive) and (buffer adj layer)) and @ad<20000727	USPAT; JPO; DERWENT	2003/08/15 11:51
13	15	((giant adj magnetoresistive) and (buffer adj layer)) and @ad<20000727 and ((buffer adj layer) same copper)	USPAT; JPO; DERWENT	2003/08/15 11:57
14	154	360/121,122,123,126.ccls. and GMR	USPAT; JPO; DERWENT	2003/08/15 11:57
15	6	(360/121,122,123,126.ccls. and GMR) and (buffer adj layer)	USPAT; JPO; DERWENT	2003/08/15 12:01
16	286	GMR and buffer	USPAT; JPO; DERWENT	2003/08/15 12:02
18	8	(GMR and buffer) and (GMR adj stack)	USPAT; JPO; DERWENT	2003/08/15 12:10
19	0	09/916064	USPAT; JPO; DERWENT	2003/08/15 12:09
20	0	09/916,064	USPAT; JPO; DERWENT	2003/08/15 12:09
22	1025	29/603.01,603.03,603.07,603.12,603.13,603.13,603.14,603.15,603.15,603.18.ccls. and (GMR adj stack)	USPAT; JPO; DERWENT	2003/08/15 12:10
23	1	29/603.01,603.03,603.07,603.12,603.13,603.13,603.14,603.15,603.15,603.18.ccls. and (GMR adj stack)	USPAT; JPO; DERWENT	2003/08/15 12:11
24	4	29/603.01,603.03,603.07,603.12,603.13,603.13,603.14,603.15,603.15,603.18.ccls. and (gmr or (GMR adj stack)) and buffer	USPAT; JPO; DERWENT	2003/08/15 12:26

27	15	("5159513" "5206590" "5251170" "5420819" "5422571" "5496759" "5583725" "5701223" "5756366" "5841692" "6097578" "6153320" "6171693" "6353318" "6362941").PN.	USPAT	2003/08/15 12:11
28	32	5841692.URPN.	USPAT	2003/08/15 12:17
31	12	("5640343" "5650958" "5729410" "5764567" "5793697" "5801984" "5835314" "5841692" "5862022" "5898547" "5898548" "5901018").PN.	USPAT	2003/08/15 12:21
32	4	("3623038" "5055158" "5390061" "5432734").PN.	USPAT	2003/08/15 12:23
35	286	(gmr or (GMR adj stack)) and buffer	USPAT; JPO; DERWENT	2003/08/15 12:27
36	15	((gmr or (GMR adj stack)) and buffer) and (planar\$7 same (insulat\$3 or dielectric))	USPAT; JPO; DERWENT	2003/08/15 12:32
37	22	("4947541" "5283942" "5285340" "5406434" "5473491" "5479696" "5590008" "5695656" "5802700" "5872693" "5874010" "5926348" "5966800" "5997381" "6043959" "6104576" "6108167" "6169642" "6195229" "6295186" "6304415" "6305072").PN.	USPAT	2003/08/15 12:34
38	54	GMR and buffer and shield	USPAT; JPO; DERWENT	2003/08/15 14:38
39	1	(GMR and buffer and shield) and CMP	USPAT; JPO; DERWENT	2003/08/15 14:42

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Neamtu, J.; Volmer, M.; Coraci, A.;

Semiconductor Conference, 1998. CAS '98 Proceedings. 1998 International , Vc 1 , 6-10 Oct. 1998

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[\[Abstract\]](#) [\[PDF Full-Text \(504 KB\)\]](#) **IEEE CNF****2 Characterization of electrodeposited magnetic multilayers**

Jyoko, Y.; Kashiwabara, S.; Hayashi, Y.; Schwarzacher, W.;

Magnetics, IEEE Transactions on , Volume: 34 Issue: 6 , Nov. 1998

Page(s): 3910 -3912

[\[Abstract\]](#) [\[PDF Full-Text \(88 KB\)\]](#) **IEEE JNL****3 Geometry effects on low frequency noise in giant magnetoresistance (GMR) sensors**

Nor, A.F.M.; Hill, E.W.; Parker, M.R.;

Magnetics, IEEE Transactions on , Volume: 34 Issue: 4 , July 1998

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[\[Abstract\]](#) [\[PDF Full-Text \(268 KB\)\]](#) **IEEE JNL****4 GMR in magnetic multilayers from a first principles band structure Kt Greenwood approach**

Rao, F.; Freeman, A.J.;

Magnetics, IEEE Transactions on , Volume: 34 Issue: 4 , July 1998
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5 Highly field sensitive and thermally stable dc magnetron sputtered soft magnetic multilayers based on Ni₈₁Fe₁₉/Cu

Yiming Huai; Minshen Tan; Rottmayer, R.;

Magnetics, IEEE Transactions on , Volume: 34 Issue: 4 , July 1998
Page(s): 918 -920

[\[Abstract\]](#) [\[PDF Full-Text \(352 KB\)\]](#) **IEEE JNL**

6 Thermal wave interactions in magnetic materials

Carey, R.; Newman, D.M.; Wiggins, J.;

Magnetics, IEEE Transactions on , Volume: 34 Issue: 4 , July 1998
Page(s): 2033 -2035

[\[Abstract\]](#) [\[PDF Full-Text \(308 KB\)\]](#) **IEEE JNL**

7 Increased field sensitivity in Co/Cu multilayers with soft adjacent layers

Jardine, D.B.; Mathur, N.D.; Blamire, M.G.; Evetts, J.E.;

Magnetics, IEEE Transactions on , Volume: 34 Issue: 4 , July 1998
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[\[Abstract\]](#) [\[PDF Full-Text \(268 KB\)\]](#) **IEEE JNL**

8 GMR in DC magnetron sputtered Ni₈₁Fe₁₉/Cu multilayers

Mao, M.; Cerjan, C.; Gibbons, M.; Law, B.; Grabner, F.; Vernon, S.P.; Wall, M.;

Magnetics, IEEE Transactions on , Volume: 34 Issue: 4 , July 1998
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[\[Abstract\]](#) [\[PDF Full-Text \(392 KB\)\]](#) **IEEE JNL**

9 Influence of impurity gas in the sputtering atmosphere on the microstructure and the GMR in Co/Cu multilayers

Miura, S.; Takahashi, D.; Tsunoda, M.; Takahashi, M.;

Magnetics, IEEE Transactions on , Volume: 34 Issue: 4 , July 1998
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[\[Abstract\]](#) [\[PDF Full-Text \(320 KB\)\]](#) **IEEE JNL**

10 Correlation between evolving magnetic and morphological properties of magnetic multilayers

Doherty, S.A.; Zhu, J.-G.; Dugas, M.; Anderson, S.; Tersteeg, J.;
Magnetics, IEEE Transactions on , Volume: 34 Issue: 4 , July 1998
Page(s): 840 -842

[\[Abstract\]](#) [\[PDF Full-Text \(428 KB\)\]](#) **IEEE JNL**

11 GMR-DMR read-element characterization and projections of head performance on high areal density rigid media

Trindade, I.G.; Kryder, M.H.; Freitas, P.P.; Smith, N.;
Magnetics, IEEE Transactions on , Volume: 34 Issue: 4 , July 1998
Page(s): 1483 -1485

[\[Abstract\]](#) [\[PDF Full-Text \(404 KB\)\]](#) **IEEE JNL**

12 CPP giant magnetoresistance of NiFeCo/Cu/CoFe/Cu multilayers

Bussmann, K.; Cheng, S.F.; Prinz, G.A.; Hu, Y.; Gutmann, R.; Wang, D.; Beedt Zhu, J.;
Magnetics, IEEE Transactions on , Volume: 34 Issue: 4 , July 1998
Page(s): 924 -926

[\[Abstract\]](#) [\[PDF Full-Text \(360 KB\)\]](#) **IEEE JNL**

13 Magnetostatic coupling in patterned spin valve structures

Jyh-Shinn Yang; Lee, J.; Ching-Ray Chang;
Magnetics, IEEE Transactions on , Volume: 34 Issue: 5 , Sept. 1998
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[\[Abstract\]](#) [\[PDF Full-Text \(320 KB\)\]](#) **IEEE JNL**

14 7th Joint MMM-Intermag Conference. Abstracts (Cat. No.98CH36275)

MMM-Intermag Conference, 1998. Abstracts., The 7th Joint , 6-9 Jan. 1998

[\[Abstract\]](#) [\[PDF Full-Text \(380 KB\)\]](#) **IEEE CNF**

15 Structure Refinement Of NiFe/Cu Multilayers With Giant Magnetoresistance By Synchrotron Radiation Source

Jiang, H.W.; Luo, G.M.; Mai, Z.H.; Lai, W.Y.;

MMM-Intermag Conference, 1998. Abstracts., The 7th Joint , 6-9 Jan. 1998
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Egeloff, W.F., Jr.; Chen, P.J.; Powell, C.J.; Parks, D.; McMichael, R.D.; Judy, J.T. Martien, D.; Berkowitz, A.E.; Daughton, J.M.;
Nonvolatile Memory Technology Conference, 1998. 1998 Proceedings. Seventh Biennial IEEE , 22-24 June 1998
 Page(s): 34 -37

[\[Abstract\]](#) [\[PDF Full-Text \(352 KB\)\]](#) **IEEE CNF****17 A practical 256K GMR NV memory for high shock applications**

Sinclair, R.A.; Mundon, S.A.; Aryal, S.C.; Sinclair, C.M.;
Nonvolatile Memory Technology Conference, 1998. 1998 Proceedings. Seventh Biennial IEEE , 22-24 June 1998
 Page(s): 38 -42

[\[Abstract\]](#) [\[PDF Full-Text \(660 KB\)\]](#) **IEEE CNF****18 High density pseudo spin valve magnetoresistive RAM**

Tehrani, S.; Durlam, M.; DeHerrera, M.; Chen, E.; Calder, J.; Kerszykowski, G.;
Nonvolatile Memory Technology Conference, 1998. 1998 Proceedings. Seventh Biennial IEEE , 22-24 June 1998
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[\[Abstract\]](#) [\[PDF Full-Text \(400 KB\)\]](#) **IEEE CNF****19 CPP Giant Magnetoresistance of NiFeCo/cu/ CoFe/cu Multilayers**

Bussmann, K.; Cheng, S.F.; Prinz, G.A.; Hu, Y.; Wang, D.; Beech, R.;

MMM-Intermag Conference, 1998. Abstracts., The 7th Joint , 6-9 Jan. 1998
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20 A self-biased spin valve sensor with a longitudinally pinned layer
Suzuki, T.; Matsutera, H.;
Magnetics, IEEE Transactions on , Volume: 34 Issue: 4 , July 1998
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21 A new multilayered structure for multilevel magnetoresistive random access memory (MRAM) cell
Won-Cheol Jeong; Byung-Il Lee; Seung-Ki Joo;
Magnetics, IEEE Transactions on , Volume: 34 Issue: 4 , July 1998
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22 Effect of microstructure on resistivity and GMR ratio in ion beam deposited spin valves
Bailey, W.E.; Guarisco, D.; Wang, S.X.;
Magnetics, IEEE Transactions on , Volume: 34 Issue: 4 , July 1998
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23 Specular reflection in spin valves bounded by NiO layers
Swagten, H.J.M.; Strijkers, G.J.; Bitter, R.H.J.N.; de Jonge, W.J.M.; Kools, J.C.;
Magnetics, IEEE Transactions on , Volume: 34 Issue: 4 , July 1998
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24 Process monitoring of spin-valve GMR deposition
Kools, J.C.S.; Paranjpe, L.; Schwartz, P.; Bubber, R.; Bergner, B.; Kula, W.; Rij, T.G.S.M.;
Magnetics, IEEE Transactions on , Volume: 34 Issue: 4 , July 1998
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25 Giant magnetoresistance of current-perpendicular exchange-biased valves of Co/Cu

Reilly, A.C.; Chiang, W.-C.; Park, W.; Hsu, S.Y.; Loloee, R.; Steenwyk, S.; Prat Jr.; Bass, J.;

Magnetics, IEEE Transactions on , Volume: 34 Issue: 4 , July 1998

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26 Growth of giant magnetoresistive spin valves with strong exchange field

Choe, G.; Tsoukatos, A.; Gupta, S.;

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27 FMR and magnetization study of NiFe/Ag/CoNi trilayer film

Koymen, A.R.; Tagirov, L.R.; Gilmutdinov, R.T.; Topacli, C.; Birlikseven, C.; Du H.Z.; Aktas, B.;

Magnetics, IEEE Transactions on , Volume: 34 Issue: 4 , July 1998

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28 Spin-valve structures with NiO pinning layers

Cowache, C.; Dieny, B.; Auffret, S.; Cartier, M.; Taylor, R.H.; O'Barr, R.; Yama S.Y.;

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29 Enhancement of magnetoresistance characteristics in spin valve structures by two-step sputter deposition

Chang-Min Park; Kyung Ho Shin;

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30 Micromagnetic analysis and current biasing of dual-stripe GMR and GMR sensors for high density recording

Freitas, P.P.; Cardoso, S.; Oliveira, N.J.;

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31 Comparison of computed amplitudes of magnetoresistance in spin-v structures with wafer probe measurements

Dieny, B.; Peireira, L.G.; Taylor, R.H.; Yamamoto, S.Y.;
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32 Characteristics of NiFe/CuNi multilayer GMR sensors for vertical GM heads

Mizuguchi, T.; Terada, S.; Miyauchi, T.; Matsuzono, A.;
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33 Activation energy of interdiffusion and interface structure for CoFe/ spin-valves

Saito, A.T.; Iwasaki, H.; Kamiguchi, Y.; Fuke, H.N.; Sahashi, M.;
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34 CoFe/IrMn spin-valves prepared on Cu islands

Umemoto, T.; Maeda, A.; Oikawa, S.; Yoshioka, K.; Takahashi, S.; Tanuma, T., Kume, M.; Shibata, K.;

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35 Improvement of GMR characteristics in [Ni₈₁Fe₁₉ /Cu] multilayers by interfacial modulation technique using Kr ions

Miyamoto, Y.; Watanabe, K.; Nishimura, K.; Nakagawa, S.; Naoe, M.;
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36 Time and temperature dependence of high thermal stability in NiO/Co/Cu/Co/M spin valves

McMichael, R.D.; Chen, P.J.; Egelhoff, W.F., Jr.;
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37 A study of voltage fluctuation, noise and magnetic instability in spin GMR recording heads

Wallash, A.;
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38 Effect of seed layer on the magnetoresistance characteristics in a-C based spin valves

Hae Seok Cho; Ueda, F.; Chunghong Hou; Fujiwara, H.;
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39 Thermal stability of CoFe, Co and NiFe/Co spin valves

Zeltser, A.M.; Pentek, K.; Menyhard, M.; Sulyok, A.;
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40 Spin-valves with bias compensation layer

Kanai, H.; Yamada, K.; Kanamine, M.; Toda, J.;

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41 New antiferromagnetic RuRhMn film and its application for spin-val

Araki, S.; Omata, E.; Sano, M.; Noguchi, K.; Morita, H.; Matsuzaki, M.;

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